RADIATION HAZARD CONTROL PLAN

Hornby Basin Property, NU

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1 Introduction

This Radiation Hazard Control Plan ("RHCP") has been developed on behalf of Future Fuels Inc. ("Future Fuels" or the "Company") in accordance with applicable legislation, guidelines, and best practices relevant to activities at the Hornby Basin Property (the "Property" or the "Project") in Nunavut, Canada.

The RHCP is scheduled to take effect in November 2025, pending approval from all relevant regulatory authorities, and will be revised if there are any significant changes to the activities outlined in existing permits.

Along with this RHCP, an Emergency Response Plan ("ERP"), Abandonment and Restoration Plan ("ARP"), Environmental Management Plan ("EMP"), Spill Contingency and Fuel Management Plan ("SCFMP"), and Waste Management Plan ("WMP") will be created for the Property as part of a property-wide management system.

1.1 Project Description

The Hornby Basin Property (the "Property" or the "Project") consists of 232 contiguous mineral claims covering approximately 3,355 km^2 (335,518 hectares) and six contiguous mineral leases covering approximately 62 km^2 (6,195 hectares). It is located on NTS map sheets 086M08, 086N01–N03, 086N05–N07, 086O03–O04, 086K16, and 086J12–J14, and is centered at 523,237mE, 7,441,310mN (NAD83 UTM Zone 11N), approximately 95 km southwest of Kugluktuk. The Property overlaps with both Crown Land and partially overlaps Inuit Owned Lands ("IOL") parcels CO-52 , CO-53, and CO-60. Future Fuels Inc. ("Future Fuels" or the "Company") holds a 100% interest in the Property.

Exploration activities at the Property to date include ground geophysical surveys. No exploration activities are planned to take place on Inuit-owned lands.

Future Fuels is proposing a 2026 exploration program on the Property, anticipated to run for approximately 185 days beginning in May and ending in October (weather permitting). Similar field programs, including the same types of exploration activities, are expected to take place annually between May and October in subsequent years. Specific dates will be relayed to the CIRNAC engineer and any other necessary regulatory agencies.

The proposed exploration program will include general exploration activities, such as prospecting, geological mapping, geochemical sampling (rock, soil, till), drone photogrammetry, airborne or ground geophysics, downhole geophysics and core drilling for up to 2 diamond drill rigs. Drillhole depth is expected to average <500m with the total annual program expected to be less than approximately 10,000m. Drillhole locations are still to be determined, but locations will be submitted to the Nunavut Water Board ("NWB") and Crown-Indigenous Relations and Northern Affairs Canada ("CIRNAC") for approval prior to any ground disturbance. All planned drillhole pads will be inspected for the presence of archaeologically significant artifacts prior to commencement of drilling.

The 2026 program will include the establishment of a seasonal 25-person camp near Mountain Lake or Mouse Lake (see Map below for potential camp locations), including a storage facility and a dedicated fuel cache. Planned camp infrastructure consists of 10-12 canvas sleeper tents (or

similar), two kitchen tents/dry tents (with showers), one office tent, two core logging tents, a generator shack, a storage facility, a fuel cache, and incinerator, and outhouses or a pacto system. Most camp structures will be canvas prospector-style tents, or similar units, typically set up with plywood flooring. The final camp location will be communicated with the relevant regulatory bodies prior to mobilization.

If required, a short-term, smaller-scale fly camp may also be established to support work in the southeastern portion of the Property. Any such temporary camp would include only essential structures and would be demobilized once work in that area is complete.

Three to five camp construction personnel will be on site for approximately 15 days (9 days for set up and 6 days for take down). Staff on site for the duration of the work program will consist of up to 3 to 5 geologists, 2 helicopter-company personnel, 1 to 2 cooks, 1 camp manager, and up to 12 drill company-personnel. Total amount of time spent on site will amount up to approximately 4,625 man-days per calendar year. This man-day estimate assumes full occupancy (25 personnel) for the full 185-day operational window.

All waste, including organic and inorganic materials, will either be incinerated on-site in accordance with regulatory guidelines or transported to Kugluktuk, NU, or Yellowknife, NWT for proper disposal.

The proposed work will be helicopter-supported and require the occasional landing of the aircraft. To mitigate any potential impact on wildlife, the helicopter will always maintain a minimum altitude of 610 m (2,100 ft) above ground level except during landing, take-off or if there is a specific requirement for low level flying (e.g. airborne surveys, drill rig moves, camp assembly). Wildlife will be avoided, and the helicopter will not land in the presence of wildlife except in an emergency.

All empty fuel drums will be brought back to Kugluktuk, NU, or Yellowknife, NWT for disposal.

The Nunavut Planning Commission (“NPC”) previously reviewed works associated with the Property and issued conformity determination (August 15, 2025), confirming that the Project is located outside the area of an applicable regional land use plan. The associated NPC File number is 150888. Activities on the Property have not been previously screened by the Nunavut Impact Review Board (“NIRB”) or other regulatory agencies.

Absolutely no activities will be conducted that will interfere with caribou cows and calves, and no exploration activities will cause a diversion in the migration patterns of any caribou. Future Fuels will communicate with all interested parties regarding caribou sightings and appraised movements in the area.

Notifications will be sent to the Hamlet and the Hunter and Trappers Organization, and in the event that further consultation is required, Future Fuels will ensure that best efforts are made to engage with the community and organizations as advised by regulatory agencies.

1.2 Future Fuels Environmental Statement

Future Fuels is committed to developing the Hornby Basin Property in a socially and environmentally responsible manner, in full compliance with all applicable federal, territorial, and local environmental laws and regulations. We aim to actively collaborate with regulatory agencies,

Indigenous organizations, environmental groups, and the public to address concerns, enhance transparency, and promote environmental stewardship throughout the life of the project.

To achieve these goals, Future Fuels has established the following environmental objectives for the Hornby Basin Property:

1. Develop the project in a socially and environmentally responsible manner.
2. Ensure full compliance with all relevant federal, territorial, and local environmental legislation, regulations, and guidelines.
3. Identify and mitigate potential environmental impacts while minimizing risks to the health and safety of workers, contractors, and the public.
4. Develop and implement a site-specific Spill Prevention and Response Plan that meets all regulatory requirements, including federal and territorial notification and reporting obligations.
5. Establish clear responsibilities and protocols for spill reporting, emergency response, and site-specific infrastructure details, including the use of the Hornby Basin Property SCFMP.
6. Implement and maintain an emergency response plan to mitigate the effects of unexpected incidents.
7. Promote the safe handling, management, and use of potentially hazardous materials, and encourage efficient, secure containment and recovery of spills to minimize environmental damage to both land and water.
8. Provide easily accessible emergency information to cleanup crews, project management, employees, contractors, and relevant regulatory agencies.
9. Maintain open and transparent communication with employees, contractors, inspectors, government entities, and regulatory bodies regarding project activities and any site changes.
10. Collaborate with federal, territorial, local, and Indigenous organizations, as well as other stakeholders, to address environmental concerns and support sound environmental policy.
11. Conduct regular training for employees and contractors on environmental policies, spill prevention, and emergency response procedures.
12. Require all contractors to adhere to the Property's environmental policies, procedures, and site-specific requirements.
13. Encourage continuous improvement by fostering a proactive environmental culture among personnel and contractors.
14. Provide site-specific details regarding facility infrastructure, emergency procedures, and environmental safeguards.
15. Address and comply with all environmental requirements related to diamond drilling activities.

2 Regulatory Sources and Guidelines

Information contained in this document is compiled from several sources such as:

- General Nuclear Safety and Control Regulations
- IAEA Safety Standards - Regulations for Safe Transport of Radioactive Material
- Nuclear Safety and Control Act
- Nuclear Substances and Radiation Devices Regulations

- Packing and Transport of Nuclear Substances Regulations
- Radiation Protection Regulations
- PDAC 13.0 Guidelines for Radiation Protection during Exploration for Uranium
- Uranium in Nunavut Review

3 Radiation Overview

During mineral exploration, radiation primarily comes from naturally occurring radioactive material (NORM), including uranium, thorium (which produces radon gas), and potassium. Radiation can be ionizing or non-ionizing; ionizing radiation has enough energy to remove electrons from atoms and therefore poses potential health risks. Although people are exposed to radiation from both natural sources (soil, rocks, cosmic rays) and artificial sources (e.g., x-rays, smoke detectors), the goal is always to keep ionizing radiation exposure as low as reasonably achievable.

NORM-related radiation generally occurs in three forms:

- **Alpha Particles:** Heavy, positively charged particles (helium nuclei). They are easily stopped by paper or the outer layer of skin but can be hazardous if inhaled or ingested.
- **Beta Particles:** Light, charged particles (electrons or positrons). They have moderate penetrating ability—capable of passing through the skin's surface—but can be shielded by clothing or plastic. As with alpha particles, they present the highest risk when inhaled or ingested.
- **Gamma Rays:** High-energy electromagnetic radiation with strong penetrating power. Gamma rays can pass through the human body or be absorbed by tissue, creating a whole-body exposure hazard. Effective shielding can be provided by dense materials such as lead or concrete.

4 Radiation in Uranium Exploration

Potential sources of mineralized material that may be encountered during uranium exploration include:

- Naturally occurring mineralized outcrops or boulder fields
- Drill core
- Drill cuttings

Radiation exposure from these materials can occur through:

- Gamma radiation emitted by uranium-bearing minerals
- Inhalation of radon gas and its decay products released from drill core or cuttings
- Inhalation of radioactive dust
- Ingestion of radioactive dust

The degree of exposure associated with handling mineralized material is influenced by:

- The grade or concentration of the mineralization
- The amount of time spent near the source

- The distance from the source
- The quantity or volume of mineralized material present

Radiation exposure from naturally occurring mineralized outcrops is generally low. As a result, exploration personnel are considered "*incidentally exposed workers"* and are regulated under provincial and territorial frameworks. Radiation protection requirements for these workers are outlined in Health Canada's **Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials (NORM)**.

5 Radiation Safety

5.1 Radiation Protection Basics

During uranium exploration, the primary radiation hazards arise from uranium-bearing outcrops, drill core, and drill cuttings. Radiation exposure can be effectively reduced by applying the three fundamental protection principles: **Time, Distance, and Shielding**.

- **Time:** Minimize the amount of time spent near radioactive material.
- **Distance:** Maximize distance from the source whenever possible.
- **Shielding:** Use appropriate barriers—such as steel, concrete, or other dense materials—when practical.

Avoid unnecessary proximity to uranium mineralization. Keep known mineralized areas or sample storage locations at least **30 meters** from active work areas. When tasks require working closer to uranium material, maintain a minimum distance of **2 meters** whenever possible, complete the required work efficiently, and promptly move away once finished. Always limit time spent near radioactive sources and maximize distance to reduce exposure.

5.2 Radiation Protection Controls

Uranium exploration and drilling operations may encounter a range of uranium grades, each presenting different levels of radiological risk. A specific radiation threshold is used to determine when Radiation Protection (RP) controls must be applied. When uranium grades remain below this threshold, conventional health and safety procedures are sufficient.

The RP threshold is derived from federal and provincial guidance on uranium exploration and radiation safety. Areas with exposure rates below 1 µSv/h do not require additional controls. However, if exposure rates exceed 1 µSv/h—approximately equivalent to 1,000 cps at one metre on a typical exploration scintillometer—Radiation Protection (RP) controls must be implemented.

5.3 Radiation Protection Guidelines

The following mandatory guidelines apply to all personnel on site:

- Minimize the amount of time spent handling radioactive material.
- Maintain as much distance as possible from radioactive sources.
- Wash hands frequently—especially after handling rock, soil, or drill core, and always before eating or smoking.

- Do not wear work clothing in non-work areas such as the kitchen tent, sleeping tents, or common spaces.
- Wear appropriate PPE (e.g., cotton gloves and safety glasses) when handling soil, till, rock, or collecting chip samples.
- Wash hands, hair, and clothing regularly.
- Do not lick any rock.
- Bandage open wounds.
- Do not eat, drink, or smoke in areas where radioactive material may be present—such as core shacks, splitting shacks, the dry, drill platforms, or any other location with elevated radiation levels.
- Control dust by wetting outcrops or work areas with water as needed.
- Periodically check field clothing with a scintillometer; if readings exceed **100 cps**, rinse clothing on site and continue rinsing until readings fall below acceptable levels.
- Store radioactive materials at least **30 metres** away from high-traffic or occupied areas, including drill shacks and core logging tents.
- Clean up any spilled or accumulated mineralized material immediately.

5.4 Mapping, Prospecting, and Geophysics

Exposure to uranium mineralization during geological field mapping, prospecting, and geophysical surveys is typically minimal. As a result, no additional radiation-specific precautions are required for these activities.

5.5 Drilling

Before establishing a drill setup, orientation tests will be completed to determine the natural background radiation levels at the site. Once drilling begins, drillers will be briefed on where mineralization is expected, how to recognize it, and how to minimize direct contact with drill core and cuttings. Any mineralized core must be stored 30 metres away from the drill shack prior to transport to the core logging tent, and a radiation placard must be posted at the storage location.

If uranium mineralization is encountered in a drill hole, drill mud solids or cuttings with concentrations exceeding 0.05% U_3O_8 will either be pumped back down the hole or collected in appropriate sealed containers for short-term storage. Drums containing mineralized cuttings will be placed temporarily on a flat, dry outcrop at least 100 metres from the high-water mark of any waterbody. The specific storage location will be identified later and must be approved by NWB and CIRNAC before any radioactive waste is stored on site. All waste drums will be removed from the project area at the end of the field season and transported to an accredited disposal facility.

Any drill hole that contains mineralization exceeding 1.0% U_3O_8 over at least 1.0 metre and with a metre-percent value above 5.0 will be sealed by grouting the entire mineralized interval, as well as 10 metres above and below it. Additionally, the upper 30 metres of the hole within bedrock will be grouted following completion of drilling.

A suitable natural depression will be selected as a sump for the disposal of benign cuttings, sludge, and non-recirculated return water during drilling. This sump must be located at least 31 metres from the ordinary high-water mark of any waterbody to prevent direct flow or additional environmental

impacts. Once drilling is completed, the sump will be restored to the natural surface contours. All reclaimed drill sites will be inspected and screened for radiation.

For procedures related to handling mineralized cuttings, refer to Future Fuels' Waste Management Plan (WMP). For drill hole sealing requirements, consult Future Fuels' Abandonment and Restoration Plan (ARP).

5.6 Core Logging

The following are mandatory guidelines while handling and logging rocks:

- Radioactive core may be temporarily stored on site in core stacks while awaiting transport from the drill.
- Core boxes containing radioactive material must be secured with a wooden or Plexiglass lid at all times.
- Radioactive core must **not** be transported unless properly closed and secured.
- All personnel working with radioactive rocks or drill core must wear TLD badges; these are mandatory at drill rigs and inside core tents.
- Workers must remain aware of their surroundings when handling radioactive material and must wear safety glasses, work gloves, and coveralls. A ½-face respirator is required when working in areas with radioactive dust. Respirators must be stored in a clean plastic bag and kept away from the work area when not in use.
- Gloves, coveralls, and other outer PPE must be laundered or replaced regularly. Contaminated PPE must not be worn in the kitchen, common areas, or sleeping tents.
- Hands must be washed thoroughly with soap and water after handling radioactive materials. Eating, drinking, or smoking near radioactive materials is strictly prohibited.
- All workstations handling radioactive core must have proper ventilation. Install ventilation fans in the core tent and ensure both ventilation and extractor fans operate at the core-splitting station.
- Radioactive core must be stored at least 30 metres away from the drill shack and core logging tent. Designate core storage areas and logging/splitting stations as radioactive zones.
- Radioactive core must be logged in and out of the core logging tent, with the date, time, and gamma levels recorded at 1-metre intervals. A radiation warning sign must be posted on the core shack door whenever radioactive material is present.
- Do not move or store radioactive core unless the boxes are fully secured with approved lids. Avoid unnecessary time near mineralized drill core or cuttings.
- Work clothing must not be worn in the kitchen, common, or sleeping areas. Drillers and helpers handling radioactive core must change out of contaminated clothing and leave these garments at the drill site to prevent helicopter contamination.
- All regulations and procedures governing the shipment of radioactive materials must be followed.
- Any spilled drill core must be returned to its box with no fragments left behind.
- Mineralized cuttings must be collected and placed into suitable containers for proper disposal (refer to Future Fuels' Waste Management Plan for detailed procedures).

5.7 ALARA – As Low As Reasonably Achievable

Future Fuels is committed to minimizing both personal and environmental radiation exposure to levels that are As Low As Reasonably Achievable (ALARA), while taking economic and social considerations into account. This commitment is supported through the use of personnel and area radiation monitoring procedures and, where necessary, the appropriate use of personal protective equipment (PPE).

6 Training

All employees entering the Hornby Basin Property will receive a full orientation program that includes comprehensive Radiation Protection Training. Weekly safety meetings will be held to review Radiation Protection procedures and discuss radiation-related hazards. In addition, daily toolbox talks will provide ongoing reminders about Radiation Hazards present in the workplace.

6.1 Worker Responsibilities

All employees and contractors working on the Property must:

- Attend all required training sessions, safety meetings, and briefings.
- Understand and adhere to the Radiation Protection Guidelines.
- Perform only those tasks that can be completed safely.
- Report any unsafe conditions immediately to a supervisor or the Project Manager.
- Wear a TLD (dosimeter) badge at all times while on site.

7 Shipping, Transport, and Storage

The shipment of radioactive materials (Class 7) from the Project site is regulated under the CNSC Packaging and Transport of Nuclear Substances Regulations (PTNSR) as well as Transport Canada's Transportation of Dangerous Goods Act and Regulations. A Project Manager certified in accordance with the Transportation of Dangerous Goods (TDG) requirements will oversee all shipments of radioactive materials.

Under these regulations, Low Specific Activity (LSA) consignments may be shipped as Excepted Packages, provided the external surface radiation dose rate does not exceed 5 μSv/hr. These containers must display the appropriate UN Number and a "radioactive" marking on an internal surface that becomes visible when the package is opened.

For the transport of uranium mineralization or ore with an average specific activity greater than 70 kBq/kg, full compliance with the Packaging and Transport of Nuclear Substances Regulations is required.

7.1 On-site Transportation and Storage

Radioactive core may be temporarily stored on the property in core stacks while awaiting transport from the drill. All core boxes containing radioactive material must be secured with a wooden or Plexiglass lid, and transportation of radioactive core will only occur when the boxes are properly closed and secured.

Once uranium concentrations have been confirmed through assay results, a determination will be made regarding long-term core storage. If the core is to remain on the property, it will be placed in the designated long-term storage area for radioactive materials. This area must be located at least 100 metres from the normal high-water mark of any waterbody and at least 31 metres from other work structures.

Radiation levels at the storage site must be reduced to below 1.0 μSv/h at 1 metre, and must not exceed 2.5 μSv/h under any circumstances. All core storage locations will be clearly marked with signage indicating radioactive hazards.

7.2 Off-Site Transportation and Shipping

7.2.1 Requirements for an Excepted Package

If the radiation intensity is less than 5 μSv/hr, the shipment may be classified as an "Excepted Package" under CNSC and TDG regulations. In this case, routine transportation requirements apply, and the material is treated as a non-dangerous good. The following procedures must be followed when preparing an Excepted Package:

- Place a "Radioactive Samples" label inside the package so it is visible when opened.
- Ensure removable surface contamination on the exterior does not exceed 0.4 Bq/cm^2, averaged over 300 cm^2.
- Affix the UN Number UN2910 to one vertical side of the container.
- Display both the Consignor and Consignee addresses on the outside of the package.
- Indicate the package weight if it exceeds 50 kg.
- Include the shipping name and UN Number on the waybill.
- Provide three copies of the shipping documentation for the shipper, carrier, and receiver.

7.2.2 Requirements for Shipping Low Specific Activity – (LSA-1) Packages

If the radiation dose rate on the exterior surface of a package exceeds 5 μSv/hr, the shipment must be classified as Low Specific Activity (LSA-1). The following requirements apply to all LSA-1 shipments:

- Display both the Consignor and Consignee addresses on the exterior of the package.
- Indicate the package weight on the outside if it exceeds 50 kg.
- Attach the Shipping Name — Radioactive Material, Low Specific Activity — and the UN Number "UN2912" to two vertical, opposite sides of the shipping container.
- Provide three copies of documentation, one each for the shipper, carrier, and receiver.
- Prepare a shipper's document identifying the consignment as a Class 7 dangerous good.
- Affix Radioactive Yellow II labels next to the shipping name and UN2912 markings. On these labels, include:
    - "LSA-1" in the radioactive contents field.
    - The estimated activity of the package in becquerels (Bq).
    - The Transportation Index (TI), calculated as:

$$\text{TI} = \frac{\text{Dose rate in μSv/hr at 1 m}}{10}$$

    - Ensure the package meets IAEA Type IP-1 Industrial Package requirements, including:

- The smallest external dimension must be at least 10 cm.
- The container must be durable and clearly marked on the exterior as “Type IP-1.”

7.2.3 Standard Units of Measure

The standard unit used to measure radioactive activity—the number of atomic decays per second—is the becquerel (Bq). Because 1 Bq represents a very small amount of activity, larger units are commonly used:

- 1 kBq (kilobecquerel) = 1,000 Bq = 1×10^3 Bq
- 1 MBq (megabecquerel) = 1,000,000 Bq = 1×10^6 Bq
- 1 GBq (gigabecquerel) = 1,000,000,000 Bq = 1×10^9 Bq
- 1 TBq (terabecquerel) = 1,000,000,000,000 Bq = 1×10^{12} Bq

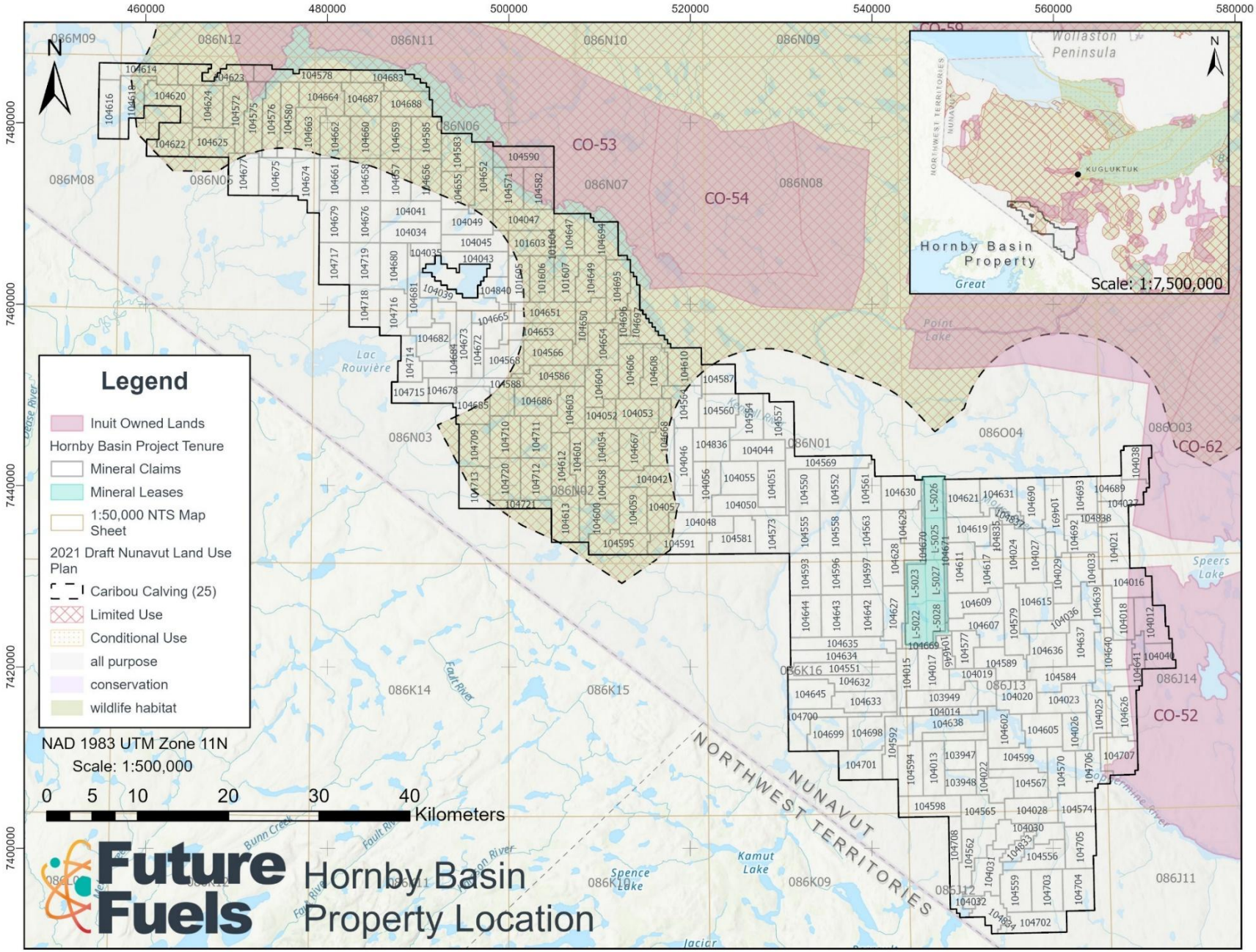
The becquerel has replaced the curie (Ci) as the standard unit of activity. Radiation dose-equivalent is expressed in sieverts (Sv), with smaller units commonly used:

- 1 mSv (millisievert) = 0.001 Sv = 1×10^{-3} Sv
- 1 μSv (microsievert) = 0.000001 Sv = 1×10^{-6} Sv

The sievert has replaced the older unit of dose-equivalent, the “rem”.

APPENDIX 1

FIGURES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Lac Rouvière
Speers Lake
Fault River
Bunn Creek
Spence Lake
Kamut Lake
Jaciar
NORTHWEST TERRITORIES
NUNAVUT
Legend
Inuit Owned Lands
Hornby Basin Project Tenure
Mineral Claims
Mineral Leases
1:50,000 NTS Map Sheet
2021 Draft Nunavut Land Use Plan
Caribou Calving (25)
Limited Use
Conditional Use
all purpose
conservation
wildlife habitat
NAD 1983 UTM Zone 11N
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0 5 10 20 30 40
Kilometers
Future Fuels
Hornby Basin
Property Location